

#2

Patent

NASA Case No. NPO-20773-1-CU

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
Adrian Stoica	)	Examiner: Unknown
	)	
Entitled: EVOLUTIONARY TECHNIQUE FOR	)	Group Art Unit: Unknown
AUTOMATED SYNTHESIS OF ELECTRONIC	)	
CIRCUITS	)	
	)	
Serial No.: To be assigned	)	
	)	
Filing Date: Herewith	)	

11017 U.S. PTO  
10/061066  
01/29/02

INFORMATION DISCLOSURE STATEMENT

Commissioner of Patent  
and Trademarks  
Washington, D.C. 20231

Sir:

Applicant hereby cites patent and/or publications for consideration by the Patent and Trademark Office in regard to the claimed invention on the attached form. By this notice the applicant requests that the Patent and Trademark Office make of record the documents listed. No representation is made that more pertinent material is not available or should not be considered by the Examiner. It is expected that the Patent and Trademark Office will independently conduct a complete search of appropriate art. Furthermore, no admission is being made that these documents are prior art, and applicant reserves the right to challenge any such consideration.

Respectfully submitted,

Dated Jan. 29, 2002

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INFORMATION  
DISCLOSURE  
CITATION FORM FOR  
PATENT APPLICATION  
(FORM PTO - 1449)

Docket No.: NP0-20773-1-CU Serial No.: To be assigned

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## U. S. PATENTS

Initials	Patent No	Issue Date	Name	Class	Subclass	Filing Date
	5,867,397	02-02-99	KOZA, et al.	364	489	
	5,897,628	04-27-99	KITANO	706	13	

## FOREIGN PATENT DOCUMENTS

Initials	Document Number	Date	Country	Name	Translation? (Yes/No/n/a)

Initials	Other Documents (Title, Author, Date, Pages, Etc., if known)
	Bennett III, F., Andre, D., Koza, J.R., and Keane, M.A., "Evolution of a 60 decibel Op Amp using genetic programming," First International Conference, <i>ICES96</i> , Tsukuba, Japan, October, 7-8, 1996, Springer, pp. 455-469
	Flockton, Stuart, J., and Sheehan, Kevin, "Intrinsic Circuit Evolution Using Programmable Analogue Arrays," Second International Conference, <i>ICES98</i> , Lausanne, Switzerland, September 23-25, 1998, Springer, pp. 144-153.
	Iba, H., Iwata, M. and Higuchi, T., "Machine Learning Approach to Gate-Level Evolvable Hardware," First International Conference, <i>ICES96</i> , Tsukuba, Japan, October 7-8, 1996, Springer, pp. 327-343.
	Kajitani, I., Hoshino, T., Nishikawa, D., Yokoi, H., Nakaya, S., Yamauchi, T., Inuo, T., Kajihara, N., Iwata, M., Keymeulen, D., Higuchi, T., "A Gate-Level Ettwchip: Implementing GA Operations and Reconfigurable Hardware on a Single LSI," Second International Conference, <i>ICES98</i> , Laussane, Switzerland, September 23-25, Springer, pop. 1-12.
	Koza, J.R., Andre, D., Bennett III, F., Keane, M.A., "Reuse Parameterized Reuse, and Hierarchical Reuse of Substructures in Evolving Electrical Circuits Using Genetic Programming, "First International Conference, <i>ICES96</i> , Tsukuba, Japan, October 7-8, 1996, Springer, pp. 312-325.

Examiner's Signature:

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Initial if reference was considered, whether or not citation with MPEP. Mark through citation if not considered. Include a copy of this citation form with your next correspondence to the Applicant(s).

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	Koza, J.R., Bennett III, F.H., Andre, D., Keane, M.A., "Automated WYWIWYG Design of Both the Topology and Component Values of Electrical Circuits Using Genetic Programming," <i>Proceedings of Genetic Programming Conference</i> , Stanford, 1996, pp. 28-31.
	Koza, J.R., Dunlap, F., Bennett III, F., Keane, M.A., Lohn, J., and Andre, D., "Automated Synthesis of Computational Circuits Using genetic Programming," <i>IEEE Transactions on Evolutionary Computation</i> , Vol. 1, No. 2, 1997, pp. 109-128.
	Lohn, Jason D., and Colombano, S.P., "Automated Analog Circuit Synthesis Using a Linear Representation," Second International Conference, <i>ICES98</i> , Lausanne, Switzerland, September 23-25, Springer, 1998, pp. 125-133.
	Murakawa, M., Yoshizawa, S., Adachi, T., Suzuki, S., Takasuka, K., Iwata, M., Higuchi, T., "Analogue EHW Chip for Intermediate Frequency Filters," Second International Conference, <i>ICES98</i> , Lausanne, Switzerland, September 23-25, 1998, Springer, pp. 132-143.
	Stoica, A., "On Hardware Evolvability and Levels of Granularity," <i>International Conference on Intelligent Systems and Semiotics</i> , NIST Gaithersburg, VA, September 1997, pp. 1-4.
	Thompson, Adrian, "Silicon Evolution," <i>Proceedings of Genetic Programming</i> , MIT Press, 1996, pp. 75-90.
	Thompson, Adrian, "On the Automatic design of Robust Electronics Through Artificial Evolution," Second International Conference, <i>ICES98</i> , Lausanne, Switzerland, September 23-25, Springer, 1998, pp. 13-24.

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	Thompson, Adrian, "An Evolved Circuit, Intrinsic in Silicon, Entwined with Physics," First International Conference, <i>ICES96</i> , Tsukuba, Japan, October 7-8, Springer, 1996, pp. 390-405.
	Zebulum, R.S., Pacheco, M.A., Vellasco, M., "Evolvable Systems in Hardware design: Taxonomy, Survey and Applications," First International Conference, <i>ICES96</i> , Tsukuba, Japan, October 7-8, Springer, 1996, pp. 344-358.
	Zebulum, R.S., Pacheco, Marco, A., Vellasco, M., "Analog Circuits Evolution in Extrinsic and Intrinsic Modes," Second International Conference, <i>ICES98</i> , Lausanne, Switzerland, September 23-25, Springer, 1998, pp. 154-165.

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